REMARKS

Upon entry of the present amendment, the claims in the application are amended claims 1-5 and 7-9, original claim 6, and new claim 10.

New claim 10 is identical to original claim 9, but depends solely from claim 8.

Applicant submits a proposed drawing correction to comply with the Examiner's objection to the original drawings.

The Examiner rejected original claims 1-4 under 35 USC 103 (a) as being unpatentable over the prior art in view of Yamashita and further in view of Kato.

The Examiner concedes that neither the prior art nor Yamashita discloses the use of an ellipse and ellipse parameters to aid in the calculation of the necessary phase angles and the according linearity correction. However, the Examiner contends that Kato, in claim 37, discloses the use of an ellipse that is used to obtain a DC offset error, a phase error and an amplitude error. The Examiner alleges that it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the ellipse technique of Kato to the combination of the prior art and Yamashita to aid in the necessary calculations, as the ellipse parameters are well known mathematical statements.

With regard to claim 2, the Examiner alleges that the use of a lookup table to aid in calculations over the use of a device is well known, and it would have been obvious to the artisan at the time the invention was made to use such a table to aid in the calculation.

The Examiner alleges that original claims 5-9 are rejected under 35 USC 103(a) as being unpatentable over the prior art in view of Yamashita.

The Examiner concedes that the prior art fails to disclose nonlinearity error correcting

electronics.

However, the Examiner alleges that Yamashita (Fig. 1) teaches the use of a circuit that rejects and compensates for non-linear distortions in the system. The Examiner alleges that it would have been obvious to the artisan at the time the invention was made to add the circuit of Yamashita to the prior art device in order to correct the admitted linearity issues that arise during the displacement detection and measurement of the prior art device.

Applicant respectfully traverses the 35 USC 103(a) rejections based on the following.

Applicant respectfully submits that combining the prior art with the amplifier with feedforward loops for rejecting nonlinear distortion of Yamashita, with the quadrature demodulator quadrature demodulation method and recording medium of Kato would not make obvious claims 1-4.

For example, such hypothetical combination of references does not disclose calculating the phase angle by the equations in claims 1, 2 and 4, nor the features set forth in the last three subparagraphs of claim 2.

Applicant respectfully traverses the 35 USC 103(a) of original claims 5-9 (which also applies to new claim 10 which is modeled after claim 9) based on the following:

The Examiner concedes that the prior art fails to disclose nonlinearity error correcting electronics.

The combination of art made by the Examiner does not disclose or make obvious the nonlinear error correcting electronics and the phase angle calculating electronics as specified in applicant's claims.

Moreover, with respect to all of the claims under rejection under 35 USC 103(a), applicant respectfully submits the following:

The genius of invention is often a combination of known elements which in hindsight seems preordained. To prevent hindsight invalidation of patent claims, the law requires some "teaching, suggestion or reason" to combine cited references. Gambro Lundia AB v. Baxter Healthcare Corp, 110 F.3d 1573, 1579, 42 USPQ2d 1378, 1383 (Fed. Cir. 1997).

The opportunity to judge by hindsight is particularly tempting. Consequently, the tests of whether to combine references need to be applied rigorously. In re Dembiczak, 175 F. 3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999); In re Gartside, 203 F.3d 1305, 53 USPQ 2d 1769 (2000) (guarding against falling victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher).

Whether a motivation to combine prior art references has been demonstrated is a question of fact. Winner International Royalty Corp. v. Wang, 202 F.3d 1340, 1348, 53 USPQ2d 1580, 1586 (Fed. Cir. 2000).

It is impermissible for the Examiner to first ascertain factually what applicant did, and then view the prior art in such a manner as to select from the random facts of that art only those which may be modified and then utilized to reconstruct applicant's invention from such prior art. In re Shuman, 361 F.2d 1008, 1012, 150 USPQ 54, 57 (CCPA 1966).

The test to be applied is whether the claimed invention would have been obvious to one skilled in the art when the invention was made, not to an Examiner after learning all about the invention. Stratoflex, Inc. v. Areoquip Corp., 713 F.2d 1530, 1538, 218 USPQ 871, 879 (Fed. Cir. 1983).

Inventions must be held to be nonobvious where neither any reference, considered in its entirety, nor the prior art as a whole, suggested the combination claimed. Fromson v. Advance Offset Plate, Inc., 755 F.2d 1549, 1556, 225 USPQ 26, 31 (Fed. Cir. 1985); ACS Hospital Systems,

Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 932-33 (Fed. Cir. 1984).

Nowhere does the rejection indicate where in the prior art there might be a suggestion of combining teachings of the individual references, or how, if there was such a suggestion, such combination would equal any invention claimed by applicant.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438.

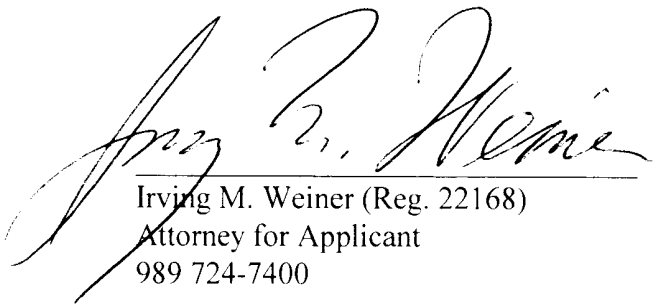
In light of the foregoing, applicant respectfully requests that the Examiner favorably consider the obviousness objection with a view toward withdrawing same.

It is respectfully submitted that the application is now in condition for allowance, and a notice to this effect is earnestly solicited.

However, if the Examiner is not convinced that the application is now in condition for allowance, it is respectfully requested that the Examiner telephone the undersigned attorney for applicant in an effort to facilitate the prosecution, and/or to narrow the issues for appeal, if necessary.

Favorable reconsideration is respectfully requested.

Respectfully submitted



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Date: September 3, 2003

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Certificate of Mailing

I hereby certify that the foregoing amendment was sent by first class mail to Mail Stop Non-Fee Amendment, Commissioner for Patents, P.O. Box 1450, Arlington, VA 22313-1450, on September 3, 2003.

Irving M. Weiner